

CLAIM CHANGES

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46. (Currently Amended) A charge processing device comprising:
detecting means for detecting position information indicating a
position where a moving body is located;

matching means for matching the position information with predetermined map information;

setting means for, based on the map information, setting an area where a charge is applied which area corresponds to a predetermined area in the map information;

receiving means for receiving toll data relating to the area where a charge is applied;

deciding means for, based on a result of a matching by the matching means, deciding an entry state indicating whether or not the moving body has at least entered into the area where a charge is applied; and

generating means for generating, based on a result of a deciding by the deciding means, charge information for the moving body, by using the received toll data.

47. (Previously Added) The charge processing device according to claim 46, the charge processing device further comprising location information detecting means for detecting, based on the position information, location information indicating date and time the moving body is located in the area in which a charge is applied, wherein the deciding means decides, based on the result of the matching by the matching means and a result of a detection by the location information detecting means, the entry state including a location state of the moving body within the area in which a charge is applied.

48. (Currently Amended) The charge processing device according to claim 46 or 47, wherein the generating means decides the entry state including a congestion state caused by moving bodies located in the area in which a charge is applied.

49. (Previously Added) The charge processing device according to claim 46, wherein the generating means is further provided with storage means in which predetermined

toll data corresponding to the entry state is stored in advance, and the generating means generates the charge information using the toll data in the storage means.

50. (Currently Amended) A charge processing device comprising:
host position detecting means for detecting a position of a host moving body;
transceiving means for , by wireless communication, transmitting position information of the host moving body to the a ground side station, and for receiving charge data toll relating to an area where a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information; and
charge processing means for performing charge processing relating to the area in which a charge is applied , at a predetermined period and based on a result of a transmission and reception by the transceiving means, wherein
the host position detecting means, the transceiving means, and the charge processing means are able to be mounted on a moving body.

51. (Previously Added) The charge processing device according to claim 50, wherein the charge processing means performs the charge processing using an IC card on which balance information is stored.

52. (Previously Added) A charge processing device comprising:
detecting means for detecting position information representing a position where a moving body is located;
charge means for, based on a result of a detection by the detecting means, executing charge processing for the moving body when the moving body has entered into an

area where a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information;

notification means which is mounted on the moving body and which notifies the outside of the moving body of a processing state of the charge processing in a notifying state corresponding to the processing state; and

continuing means for continuing a notification by the notification means during the moving body is located inside the area in which a charge is applied, based on a result of the detection by the detecting means.

53. (Previously Added) The charge processing device according to claim 52, wherein the notification means is a radiation means for radiating electromagnetic waves towards the outside of a vehicle.

54. (Previously Added) The charge processing device according to claim 52, wherein the notification means is constructed as a light source disposed on the detecting means, or on a number plate the moving body, or in an area around the number plate of the moving body.

55. (Previously Added) The charge processing device according to claim 52, wherein the notification means performs notification in a predetermined operating pattern in which the notification state is altered in the manner of a time series.

56. (Previously Added) The charge processing device according to claim 55, wherein the notification means is further provided with receiving means for receiving a pattern signal representing the operating pattern, and notification of the processing state is made to the outside of a vehicle based on the pattern signal.

57. (Previously Added) The charge processing device according to claim 52, wherein the notification means is structured from a vehicle exterior notification means for notifying the outside of the vehicle of the processing state, and a vehicle interior notification means for notifying the inside of the vehicle of the processing state, and notification of the processing state is made to the interior and exterior of the vehicle.

58. (Previously Added) A charge processing device comprising:

observation means for observing a notification from notification means provided in a charge processing device of a moving body which charge processing device of a moving body comprises:

detecting means for detecting position information representing a position where the moving body is located;

charge means for, based on a result of a detection by the detecting means, executing charge processing for the moving body when the moving body has entered into an area where a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information;

the notification means which is mounted on the moving body and which notifies the outside of the moving body of a processing state of the charge processing in a notifying state corresponding to the processing state; and

continuing means for continuing a notification by the notification means while the moving body is located inside the area in which a charge is applied, based on a result of the detection by the detecting means.

59. (Previously Added) The charge processing device according to claim 58, wherein the observation means observes a notification by detecting at least brightness.

60. (Previously Added) The charge processing device according to claim 58, wherein the observation means is an image pickup means capable of picking up either one or a plurality of images having at least brightness.

61. (Previously Added) The charge processing device according to claim 58, wherein the observation means observes a notification by detecting at least brightness in synchronization with the observation pattern determined in advance that is altered in the manner of a time series.

62. (Previously Added) The charge processing device according to claim 61, wherein the observation means is further provided with receiving means for receiving a pattern signal indicating the observation pattern, and the observation means observes a notification in synchronization with the observation pattern based on the pattern signal.

63. (Previously Added) The charge processing device according to claim 58, wherein the charge processing device is further provided with deciding means for deciding a processing state of the charge processing based on an observation result by the observation means.

64. (Previously Added) The charge processing device according to claim 63, wherein the deciding means is provided with comparing means for comparing a notification state of a notification obtained by the observation means with a predetermined notification

state, and processing deciding means for deciding a processing state of the charge processing based on a comparison result by the comparing means.

65. (Previously Added) A charge processing device which is portable comprising: receiving means for receiving a pattern signal indicating an observation pattern altered in the manner of a time series in order to observe a notification from a notification means provided in the charge processing device of a moving body which charge processing device of a moving body comprises:

detecting means for detecting position information representing a position where a moving body is located;

charge means for, based on a result of a detection by the detecting means, executing charge processing for the moving body when the moving body has entered into an area where a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information;

the notification means which is mounted on the moving body and which notifies the outside of the moving body of a processing state of the charge processing in a notifying state corresponding to the processing state; and

continuing means for continuing a notification by the notification means during the moving body is located inside the area in which a charge is applied, based on a result of the detection by the detecting means,

and,

presenting means for presenting notification information corresponding to the observation pattern in synchronization with the observation pattern based on the pattern signal.

66. (Previously Added) The charge processing device according to claim 65, wherein the presenting means presents observation information by at least one of sound and light.

67. (Currently Amended) A charge processing device comprising:

- detecting means for detecting position information indicating a position where a moving body is located;
- matching means for matching predetermined map information and the position information;
- setting means for, based on the map information, setting an area where a charge is applied which area corresponds to a predetermined area in the map information;
- deciding means for, based on a result of a matching by the matching means, deciding an entry state indicating whether or not the moving body has at least entered into the area where a charge is applied; and
- making means for, based on a result of a decision by the deciding means, generating charge information for the moving body in the area where a charge is applied, as well as making, at a predetermined period, a charge history of the generated charge information; and
- transmitting means for transmitting the charge history of the charge information generated by the ~~generating~~ making means to ~~the~~ a ground side station.

68. (Currently Amended) The charge processing device according to claim 67, wherein the making means is ~~formed from generating means for generating~~ generates charge information for each of a plurality of existing areas where a charge is applied, and ~~accumulating means for accumulating~~ accumulates in sequence the generated charge information as charge history.

69. (Previously Added) The charge processing device according to claim 67, wherein the detecting means detects the position information using satellite signals from satellites.

70. (Currently Amended) A charge processing system comprising:
in-vehicle communication means ~~comprises~~ comprising:
detecting means for detecting position information indicating a position where a moving body is located;
matching means for matching predetermined map information and the position information;
setting means for, based on the map information, setting an area where a charge is applied which area corresponds to a predetermined area in the map information;
deciding means for, based on a result of a matching by the matching means, deciding an entry state indicating whether or not the moving body has at least entered into the area where a charge is applied; and
making means for, based on a result of a decision by the deciding means, generating charge information for the moving body in the area where a charge is applied, as well as making, at a predetermined period, a charge history of the generated charge information; and
transmitting means for transmitting the charge history of the charge information generated by the generating making means to ~~the~~ a ground side station,
wherein the transmission means transmits charge history in accordance with an input transmission request,
and,

on-road communication means having request means for performing the transmission request and processing means for performing charge settlement processing in a predetermined processing area and based on a transmitted charge history.

71. (Currently Amended) The charge processing system according to claim 70, wherein the on-road communication means is further provided with altering means for altering the amount of the charge settlement based on a duration of time until an arrival in the processing area.

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72. (Currently Amended) A charge processing device comprising:
detecting means for detecting position information indicating a position where a moving body is located;
~~storage means~~ a toll card capable of being inserted and removed for storing a predetermined area in which a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information; and
generating means for, at a predetermined period, generating charge information for the moving body based on a result of a detection by the detecting means and the area in which a charge is applied stored in the loaded storage means.

73. (Previously Added) The charge processing device according to claim 72, wherein the generating means is provided with a reading means for reading a result of a detection by the detecting means and the area in which a charge is applied stored in the storage means, and generates charge information from the read position information and the area in which a charge is applied.

74. (Cancelled) , wherein the storage means is a toll card on which is stored the area in which a charge is applied for generating at least charge information.

75. (Previously Added) A charge processing card comprising:
a loading portion for loading in an in-vehicle device that detects position information indicating a position where a moving body is located, and generates charge information from the position information and from an area where a charge is applied which area is set based on predetermined map information in correspondence with a predetermined area in the map information;

an area storage portion for storing the area in which a charge is applied; and
a balance storage section for storing balance information.

76. (Previously Added) A charge processing device carried by a user or mounted on a moving body comprising:

means for detecting a ground position;

storage means for storing area specifying information, which is set based on predetermined map information in correspondence with a predetermined area in the map information, and inside-area control information;

notification control means for generating position relation information in a charge processing device for an area indicated by area specifying information, based on the ground position detected by the ground position detecting means and the area specifying information of the storage means; and

notification means for notifying a user as to information expressed by the area specifying information and the inside-area control information and the position relation information.

77. (Previously Added) A charge processing device carried by a user or mounted on a moving body comprising:

means for detecting a ground position;

storage means for storing charge area specifying information which is set based on predetermined map information in correspondence with a predetermined area in the map information, inside-area charge information, and credit information;

notification control means for generating position relation information in a charge processing device for a charge area indicated by the charge area specifying information, based on the ground position detected by the ground position detecting means and the charge area specifying information of the storage means, and updating the credit information in the storage means in response to changes outside and inside the ground position relative to the charge area; and

notification means for notifying a user as to information expressed by the charge area specifying information, the inside-area charge information, and the credit information and the position relation information.

78. (Previously Added) A charge processing system comprising:

a notification device that is a charge processing device carried by a user or mounted on a moving body and includes means for detecting a ground position,

communication means for receiving area specifying information which is set based on predetermined map information in correspondence with a predetermined area in the map information,

storage means for storing received area specifying information,

notification control means for generating position relation information in a charge processing device for an area indicated by the area specifying information based on

the ground position detected by the ground position detecting means and the area specifying information of the storage means, and

notification means for notifying a user as to the position relation information;

and

a transmitting station comprising

public notification information storage means for storing the area specifying information, and

transmitting means for transmitting the area specifying information of the public notification information storage means.

79. (Previously Added) A charge processing system comprising:
a notification device that is a charge processing device carried by a user or mounted on a moving body and includes
means for detecting a ground position,
communication means for receiving charge area specifying information which is set based on predetermined map information in correspondence with a predetermined area in the map information, and inside-area charge information,
storage means for storing received charge area specifying information and inside-area charge information, and credit information,
notification control means for generating position relation information in a charge processing device for a charge area, based on the ground position detected by the ground position detecting means and the charge area specifying information of the storage means, and updating the credit information in the storage means in response to changes outside and inside the ground position relative to the charge area, and

notification means for notifying a user as to information expressed by the charge area specifying information, the inside-area charge information, and the credit information and the position relation information; and

a transmitting station comprising

public notification information storage means for storing area specifying information and the inside-area charge information, and

transmitting means for transmitting the area specifying information and the inside-area charge information of the public notification information storage means.

80. (Previously Added) A charge processing device carried by a user or mounted on a moving body comprising:

means for detecting a ground position;

storage means for storing area specifying information which is set based on predetermined map information in correspondence with a predetermined area in the map information, and credit information;

relative position determining means for calculating whether the ground position detected by the ground position detecting means is inside or outside an area represented by the area specifying information in the storage means;

interruption instruction means;

time measuring means for measuring a time elapsed inside the area during a period in which there is no interruption instruction from the interruption instruction means; and

charge processing means for updating the credit information based on a value of a time measured by the time measuring means.

81. (Previously Added) The charge device according to claim 80, wherein the charge device further comprises notification means for notifying a user about information representing the area specifying information and the credit information.

82. (Previously Added) The charge processing device according to claim 80, wherein the charge processing device further comprises: notification control means for generating approach information that the charge processing device is approaching the area represented by the area specifying information based on the ground position detected by the ground position detecting means and the area specifying information of the storage means; and notification means for notifying a user about information representing the approach information, the area specifying information, and the credit information.

83. (Previously Added) A charge processing device carried by a user or mounted on a moving body comprising:

means for detecting a ground position;

storage means for storing area specifying information which is set based on predetermined map information in correspondence with a predetermined area in the map information, and credit information;

relative position determining means for calculating whether the ground position detected by the ground position detecting means is inside or outside an area represented by the area specifying information in the storage means;

distance measuring means for measuring a distance moved within the area;

and

charge processing means for updating the credit information based on a distance measured by the distance measuring means.

84. (Previously Added) The charge device according to claim 37, wherein the charge device further comprises notification means for notifying a user about information representing the area specifying information and the credit information.

85. (Previously Added) The charge processing device according to claim 37, wherein the charge processing device further comprises: notification control means for generating approach information that the charge processing device is approaching the area represented by the area specifying information based on the ground position detected by the ground position detecting means and the area specifying information of the storage means; and notification means for notifying a user about information representing the approach information, the area specifying information, and the credit information.

86. (Previously Added) A charge processing system comprising:
a charge device that is carried by a user or mounted on a moving body and is provided with

means for detecting a ground position,
communication means for receiving area specifying information,
storage means for storing received area specifying information, and credit information,

relative position determining means for calculating whether the ground position detected by the ground position detecting means is inside or outside an area represented by the area specifying information in the storage means;

interruption instruction means,
time measuring means for measuring the time elapsed inside the area during a period in which there is no interruption instruction from the interruption instruction means, and

charge processing means for updating the credit information based on a value of a time measured by the time measuring means; and
a transmitting station that includes
public notification information storage means for the storing area specifying information, and
transmitting means for transmitting the area specifying information of the public notification information storage means.

87. (Previously Added) The charge processing device or charge processing system according to claim 80, wherein the charge processing device is mounted on a moving body, and the interruption instruction means performs an interruption instruction interconnectedly with the off operation of an ignition of the moving body.

88. (Previously Added) The charge processing device or charge processing system according to claim 40, wherein the charge processing device is mounted on a moving body, and the interruption instruction means performs an interruption instruction interconnectedly with the off operation of an ignition of the moving body.

89. (Previously Added) A charge processing system comprising:
a charge processing device that is carried by a user or mounted on a moving body and is provided with
means for detecting a ground position,
communication means for receiving area specifying information which is set based on predetermined map information in correspondence with a predetermined area in the map information,
storage means for storing received area specifying information, and credit information,

relative position determining means for calculating whether the ground position detected by the ground position detecting means is inside or outside an area represented by the area specifying information in the storage means;

distance measuring means for measuring a distance moved inside the area,

and

charge processing means for updating the credit information based on a distance measured by the distance measuring means; and

a transmitting station that includes

public notification information storage means for storing the area specifying information, and

transmitting means for the transmitting area specifying information of the public notification information storage means.

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90. (Previously Added) A charge processing device comprising:

storage means for storing credit information;

read and write means for reading the credit information from the storage means and writing the credit information to the storage means;

entry detecting means for detecting an entry into a charge area which is set based on predetermined map information in correspondence with a predetermined area in the map information,;

charge processing means for updating, in accordance with a charge toll, the credit information in the storage means via the read and write means in response to traffic in the charge area; and

communication means for transmitting charge device state information including whether or not reading and writing of credit information in the storage means is possible while in the charge area.

91. (Previously Added) A charge processing device comprising:

- means for detecting a ground position;
- storage means for storing credit information, charge areas which are set based on predetermined map information in correspondence with predetermined areas in the map information, and charge tolls;
- charge processing means for detecting whether the ground position detected by the ground position detecting means is within the charge area, and updating, in accordance with the charge toll, credit information in the storage means in response to a traffic in the charge area; and
- communication means for transmitting charge device state information including whether or not ground position detection by the ground position detecting means is possible while in the charge area.

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92. (Previously Added) A charge processing system comprising:

- a charge processing device that includes
 - storage means for storing credit information,
 - read and write means for reading the credit information from the storage means and writing the credit information to the storage means,
 - entry detecting means for detecting an entry into a charge area which is set based on predetermined map information in correspondence with a predetermined area in the map information,
 - charge processing means for updating, in accordance with the charge toll, the credit information in the storage means via the read and write means in response to a traffic in the charge area, and

first communication means for receiving a data request and transmitting charge device state information including whether or not reading and writing of credit information in the storage means is possible while in the charge area; and

a control station that includes

second communication means for transmitting the data request to the charge processing device and receiving the charge processing device state information from the charge processing device, and

searching means for checking for erroneous use of the charge processing device based on received data.